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TC 1700 TRANSMITTAL LETTER

Re Application of:
HANS WESTMIJZE et al.

Serial No: 09/889,436

Filing Date: October 13, 2001

Title: AQUEOUS PEROXIDE EMULSIONS

Commissioner for Patents
P.O. Box 1450, Alexandria, VA 22313-1450

Docket No: ACD 2665 US

Examiner: M. L. Reddick

Group Art Unit: 1713

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on July 2, 2003

Christina Cangalosi
Christina Cangalosi

Sir:

☒ Transmitted herewith find the document(s) related to this application.
TRANSMITTAL LETTER IN DUPLICATE; SUPPLEMENTAL APPEAL BRIEF WITH
APPENDIX IN TRIPLICATE; CERTIFICATE OF MAILING; AND POST CARD.

- ☐ Applicant hereby petitions for an extension of time under 37 CFR 1.136 of:
- ☐ One Month (\$110.00)
 - ☐ Three Months (\$930.00)
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may be due (including filing fees under 37 CFR 1.16 and processing fees under 37 CFR
1.17) to Deposit Account No. 01-1350. If an extension of time is required but has not been
requested above, Applicant hereby petitions for an extension of time sufficient for the
attached document(s) to be timely. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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SUPPLEMENTAL APPEAL BRIEF

This Supplemental Appeal Brief is in response the Notification of Non-Compliance, dated June 9, 2003.

This is an appeal from the Final Rejection of Claims 1-15, dated June 25, 2002, which Claims are now Claims 16-29, which were finally rejected on November 6, 2002.

The text of the rejected Claims is reproduced in the Appendix attached as last section to this Appeal Brief.

REAL PARTY IN INTEREST

The real party in interest for this Appeal is Akzo Nobel N.V., Arnhem, The Netherlands.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences to the instant appeal.

STATUS OF CLAIMS

Claims 16-29 are pending in the instant application and all have been rejected. Claims 1-15 were previously cancelled.

STATUS OF AMENDMENTS

All Amendments have been entered, including an Amendment after Final Rejection wherein new Claims 16-29 were added to the application in place of original Claims 1-15, which were cancelled.

SUMMARY OF INVENTION

The present invention relates to an aqueous peroxide emulsion, comprising a peroxide and optionally containing anti-freeze and/or further additives. The peroxide emulsion contains a specific emulsifier system which consists essentially of a copolymer of an α,β -unsaturated dicarboxylic acid and a C_{8-24} α -olefin, the acid groups of which are esterified with an ethoxylated alcohol having a degree of ethoxylation of 1-45. The emulsifier system further comprises an ethoxylated fatty alcohol with an HLB-value greater than 16.

ISSUES

The following two issues are presented for this Appeal:

Whether the Examiner was correct in rejecting Claims 16-29 as obvious over EP 492,712 in combination with PCT WO 98/18835, US 4,499,250, US 4,547,481 or US 4,734,135; and

Whether the Examiner was correct in rejecting in rejecting new Claim 24 under the second paragraph of Section 112.

GROUPING OF CLAIMS

For purposes of the present Appeal, all pending Claims stand or fall together.

ARGUMENT

The Rejection under Section 103

It is well established that to establish a *prima facie* case of obviousness, the Patent and Trademark Office must satisfy *all* of the following requirements. First, *the prior art relied upon*, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the person of ordinary skill in the art to modify a reference or to combine references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Second, the proposed modification must have had a reasonable expectation of success, as determined from the vantage point of one of ordinary skill in the art at the time the invention was made. *Amgen v. Chugai Pharmaceutical Co.*, 18 U.S.P.Q.2d 1016, 1023 (Fed. Cir. 1991, cert. denied, 502 U.S. 856 (1991)). Third, the prior art references or combination of references must teach or suggest all of the limitations of the claims. *In re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1070). In the present situation, the Examiner has not established a *prima facie* case of obviousness.

Cited EP 492,12 discloses a peroxide emulsion comprising a copolymer of an unsaturated dicarboxylic acid and a C₈-C₂₄ olefin, and a second copolymer of at least one polyalkylene and a polysiloxane. The presence of ethoxylated fatty alcohols in the emulsifier system is neither mentioned nor suggested by this reference.

PCT WO 98/18835 describes a peroxide emulsion comprising one or more polyvinyl alcohols and one or more emulsifiers that may be an ethoxylated fatty alcohol. Hence, if the teachings of EP 192,712 and PCT WO 98/18835 were to be combined, a peroxide emulsion would be obtained that contained at least a copolymer of an unsaturated

dicarboxylic acid and a C₈-C₂₄ olefin, a copolymer of at least one polyalkylene and a polysiloxane, a polyvinyl alcohol and an ethoxylated fatty alcohol.

In order to arrive at the subject matter of Claim 16, the person of ordinary skill in the art has to specifically choose to leave out from the composition the copolymer of polyalkylene and polysiloxane and polyvinylalcohol, although neither of the above-mentioned documents gives any direct reference or suggestion to help such a person with this choice. Moreover, PCT WO 98/18835 specifically refers to the composition described in EP 492,712 as being an unacceptable formulation of polyvinyl chloride, thus indicating that the person of ordinary skill in the art, when looking at the EP document, is looking in the wrong direction. Consequently, such a person would never combine these two documents, as the Examiner has done.

The person of ordinary skill in the art would also not derive the subject matter of new Claim 16 from a combination of EP 492,712 and US 4,547,481 (or US 4,499,250, a divisional thereof). US 4,547,481 describes a peroxide emulsion comprising an ethoxylated fatty alcohol or an ethoxylated fatty acid. If one were to combine the EP document with the teachings of either of these US patents, one first has to choose the ethoxylated fatty alcohol, instead of the ethoxylated fatty acid, and subsequently one has to leave out the copolymer of polyalkylene and polysiloxane in order to arrive at the subject matter of new Claim 16. Since these cited documents do not refer to one another in any way, and since they do teach or indicate to combine both teachings, these choices would not have been to the person of ordinary skill in the art. In addition, US 4,499,250 teaches such a person that ethoxylated fatty acids are preferred over ethoxylated fatty alcohols (see Col. 3, lines 38-40),

thereby making the choice for an emulsion with ethoxylated fatty alcohols even less obvious.

Moreover, a combination of the cited EP document, PCT WO 98/18835 or US 4,547,481/US 4,734,135 does not teach the person of ordinary skill in the art the peroxide emulsion of new Claim 16 either for exactly the same reasons enumerated above. More specifically, the person of ordinary skill in the art would not derive, in an allegedly obvious manner, from such a combination of prior art documents a peroxide emulsion which consists essentially of a copolymer of an α,β -unsaturated dicarboxylic acid and a C_8-C_{24} α -olefin, the acid groups of which are esterified with an ethoxylated alcohol having a degree of ethoxylation of 1-45.

For the foregoing reasons, the Board is requested to reverse the obviousness rejection that currently exists in regard to Claims 16-29.

The Rejection Under Section 112

The Examiner has argued that the terminology "a viscosity between 10-300 mPa.s" is indefinite "as per the conditions under which such was obtained is not readily ascertainable". The Board is requested to reject this contention and reverse the rejection since it is deemed that the articulation of final viscosity values in this Claim is quite definite especially when that Claim needs to be construed in light of the specification where the conditions are articulated at page 7, lines 2-6. It is not improper form to merely recite the viscosity value as has been done in Claim 24. In this regard the Board is requested to consider the representative and attached Claims section from U.S. Patent Nos. 4,137,213 (see the preamble of Claim 1 where underlined) and 5,286,806 (see Claim 1, subparagraph c) and Claim 2, both where underlined).

For all of the reasons provided herein, the Board is requested to reverse each of the Examiner's rejections.

Respectfully submitted,

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2665AB.DOC

APPENDIX

THE REJECTED CLAIMS

-- 16. An aqueous peroxide emulsion, comprising a peroxide and optionally containing anti-freeze and/or further additives, which contains a specific emulsifier system which consists essentially of a copolymer of an α,β -unsaturated dicarboxylic acid and a C₈₋₂₄ α -olefin the acid groups of which are esterified with an ethoxylated alcohol having a degree of ethoxylation of 1-45, characterized in that the emulsifier system further comprises an ethoxylated fatty alcohol with an HLB-value greater than 16. --;

-- 17. The emulsion according to Claim 16 wherein the peroxide is selected from the group consisting of peroxyesters, peroxydicarbonates, peroxyarbonates, diacyl peroxides, and combinations thereof, and in which said peroxide is present in an amount of 30-70% by weight, based on the weight of the emulsion.--;

-- 18. The emulsion according to Claim 17 comprising one or more peroxides which require refrigerated storage and are present in an amount of 40-65% by weight, based on the weight of the emulsion. -
-;

-- 19. The emulsion according to Claim 18 further comprising an anti-freeze selected from the group consisting of methanol, ethanol, isopropanol, ethylene glycol, propylene glycol, and glycerol. --;

-- 20. The emulsion according to any one of the Claims 16-19 wherein the copolymer is present in an amount of 0.05 to 20% by weight and the ethoxylated fatty alcohol is present in an amount of 0.02-15% by weight, with the proviso that the total weight of both

compounds is at least 0.5% by weight, all based on the weight of the peroxide in said emulsion. --;

-- 21. The emulsion according to claim 20 wherein the copolymer is present in an amount of 0.1-15% by weight, based on the weight of the peroxide. --;

-- 22. The emulsion according to any one of the Claims 16-19 wherein the HLB value of the ethoxylated fatty alcohol is greater than 16.5. --;

-- 23. The emulsion according to any one of Claims 16-19 wherein the droplet size of the emulsion, when measured using a Malvern Easy Sizer, is characterized by a d50 of 0.1-2.0 μm and a d99 of 0.5-9.0 μm .--;

-- 24. The emulsion according to any one of Claims 16-19 wherein the ingredients are chosen in such a way that a viscosity between 10-300 mPa.s is obtained. --;

-- 25. A polymerization process comprising polymerizing a monomer in the presence of an emulsion according to any one of Claims 16-19 or a polymerisation modification process comprising treating a polymer with an emulsion according to any one of Claims 16-19. --;

-- 26. Polyvinyl chloride obtained by a process involving the reaction of at least vinyl chloride monomer and peroxide that was used in the form of an emulsion according to any one of Claims 16-19. --;

-- 27. The emulsion according to Claim 17 wherein the peroxide selected from the group consisting of peroxyesters, peroxydicarbonates, peroxyarbonates, diacyl peroxides, and combinations thereof, requires refrigerated storage and is present in an amount of 50-65% by weight, based on the weight of the emulsion. -
-;

-- 28. The emulsion according to Claim 20 wherein the copolymer is present in an amount of 0.2-10% by weight, based on the weight of the peroxide. --;

-- 29. The emulsion according to any one of Claims 16-19 wherein the HLB value of the ethoxylated fatty alcohol is greater than 17.0. --